

NOVEMBER 1954

ARMY INFORMATION DIGEST



In This Issue:

PREPAREDNESS is also an attitude of mind. In the arena of ideas, dynamic forces are released when time-tested troop and public relations principles are applied. In the lead article, a veteran in the information field defines the nature of the "Battle for Men's Minds." His challenge is accepted and given all-out support by the Army Chief of Information.

ONCE TROOPS are properly motivated and imbued with the will to win, they can be welded into an irresistible fighting force. First as small units, then as companies and progressing through battalions, regiments and divisions, the principles of team play are put to test in "Maneuvers — The Final Exam."

COURAGE wears a variety of uniforms. It may be the spiked shoes and mountain climbing gear of Army alpinists overcoming "Peril at Agrihan." Or it may simply involve the stab of a hypodermic needle, willingly endured by volunteers in Army medical research who are determined "That Others May Live."

NORTHERN BASTION. Alaska with its 586,000 square miles of sparsely settled country (average .225 per square mile compared to 50.7 in the United States) is more than an outlying piece of real estate. It is a strategic rampart and sentry post guarding America's northern frontier. For more than half a century, the Army Signal Corps has maintained and kept secure our "Lifeline to the North."

WHIRRING BUSINESS MACHINES are the pollsters when Army planners require facts on Army personnel. Scientific sampling methods are used when "G-1 Cuts a Slice."

WHERE THRIFT PAYS OFF. For some 435,000 enlisted personnel, WDAGO Form 14-38 is exciting reading. This "Soldier's Book of the Month" records the amounts saved under the Soldier's Deposits program.

THE BIG NEWS in every company orderly room is Operation Paper Saving which became effective Army-wide on 1 October. The newly instituted program saves time for commanders and their staffs and increases efficiency, too. Numerous benefits accrue from "Streamlining Army Regulations."

COVER SCENES. The daring climber on the front cover is the Commandant of the Army Mountain Training School at Camp Weir, Japan. Ten of his students proved they learned their lessons well in a breath-taking recovery mission at Agrihan. On the back cover, shellfire and tracers paint eerie silhouettes as troops gain familiarity with night fighting techniques.

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A Battle for M

"I Accept This Challenge..."

Colonel Cecil J. Gridley, whose considered philosophy of information appears opposite, has had more practical experience in the research of information problems and the planning of information programs for the Army than any officer in the Service today.

Colonel Gridley entered the Service in 1917 as a 2d Lieutenant of Infantry. His service up to 1937 was similar to that of most of his associates—long years of command duty with small units interspersed by staff, school and civilian component assignments. In 1937 he obtained the highly sought after assignment to the Army War College and followed this with assignments to the Command and General Staff School and the War Department Staff. His World War II service was spent in the China-Burma-India Theater.

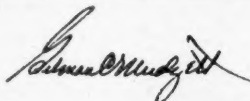
In 1948 he returned to Washington with the Office of the Chief of Information. His first duty in this office was as a liaison officer to the General Staff Sections charged with insuring that the Department of Army's programs, directives and implementing actions took full cognizance of their impact on the public. From this assignment grew the Plans and Policy Division of the Office of the Chief of Information which he organized, then headed through many subsequent reorganizations up to the day of his retirement.

Colonel Gridley's "A Battle for Men's Minds" was completed on 31 August 1954, the day of his retirement. The views there presented are the development of long years of research, patient overcoming of obstacles, and tireless effort to educate the Army on the nature and importance of a sound, progressive information program.

Recognition has not been denied the doctrine Colonel Gridley sets forth. The proof rests on many actions taken by the Department of the Army, culminating in the dynamic directive addressed on 4 June 1954 by the Chief of Staff to commanders and staff on Troop, Public and Congressional Relations.

Nevertheless, much remains to be done. The principles Colonel Gridley sets forth need to become the instinctive thinking of all members of the Army before we can fairly expect throughout the Army, the steady, prolonged, and uniform accumulation of small actions on the part of all personnel which in the end create and shape a favorable climate of opinion both within and without the Army.

This is the challenge that Colonel Gridley sets forth in his final paragraph. As Chief of Information, I accept this challenge for the Army. As I pledge my efforts, and the efforts of my Office to this end, I can hope for success only in its equal acceptance by all the citizens of the United States of America who are now privileged, or in the future will be privileged, to wear the uniform.



GILMAN C. MUDGETT
Major General, GS
Chief of Information

Men's Minds

*With public opinion
nothing can fail;
without it
nothing can succeed.*

ABRAHAM LINCOLN



COL. CECIL J. GRIDLEY

ONE OF THE MOST trying ordeals through which any nation can ever be called upon to pass is that created by civil war. Public sentiment mounts to a white heat on both sides. Families become divided against themselves. Of all men who have spoken on the subject of public opinion, surely none can be considered better qualified than Abraham Lincoln.

Some four score years later, the leaders of this country faced another critical period in the Nation's history. A world war had just been brought to a close. The greatest military machine ever created had suddenly disintegrated. The American people, tired from nearly four years of war and with memories of a previous world war still fresh in their minds, earnestly hoped for peace. Many of our leaders however realized that the struggle was not yet ended and that the United States must remain strong militarily. To meet this situation, called for unpopular measures. Again, the power of public opinion was recognized.

Seeking a solution to the problem confronting the Army, General Marshall, then Chief of Staff, turned to one of the outstanding authorities in the field of public opinion. Mr. Arthur W. Page of the American Telephone and Telegraph Company was called upon for advice. Instead of finding one organization working in the field of public relations, he found three, each operating independently. He pointed out that the Army's public relations embrace not only the general public but also the

public's representatives in Congress and that portion of the public temporarily in uniform—the troops. Co-ordination of the activities of these three separate agencies under the policy control and direction of a single individual was indicated by Mr. Page as the most effective approach to a solution of the problem of the Army's relations with the public.

It should be readily apparent that public information and troop information cannot be considered as two separate and distinct fields of endeavor. As much as the Army may desire the respect and confidence of the public, no amount of public information effort can possibly bring about that happy situation unless the Army demonstrates that it is deserving of such respect and confidence. Actions speak louder than words. Those wearing the uniform convey to their friends and relatives a picture of the Army as they know it. The millions of voters who have worn the uniform think of the Army as they have known it. Against that background, what hope is there for the press handout that does not check with realities? No amount of press-agentry can for long make anything appear to be something other than what it actually is.

In today's highly competitive world, every enterprise that would succeed is engaged in a battle for men's minds, whether that enterprise be private industry or public service, the owner of the corner grocery or an entire democracy fighting for its very existence. As the demands upon his time and resources mount, each individual of necessity becomes more and more discriminating as to the uses to which they shall be put. That enterprise that can most effectively demonstrate its worthiness of support is therefore the one most likely to succeed.

Private industry has long since learned this lesson. It has also learned that the first group of people to convince is its own personnel. Those who believe in what they are doing turn out a better product, perform more efficiently, and reinforce the efforts of the firm's publicity department and sales force.

Unfortunately, this concept, although repeatedly brought to the attention of the Army throughout the past decade, has received far too little recognition. Too many people still think that the Army can live unto itself; that what the Army does is strictly the Army's business; that the lot of the soldier is "not to reason why, theirs but to do or die." At the same time, many of these same people complain bitterly about the lack of

public understanding and support of the Army, charge the news media with misrepresenting the Army, and bemoan the increasing lack of attractiveness of military service as a career. The Army in general has not yet accepted the fact that, whether it wills it or not, it is engaged in the battle for men's minds as truly as any other enterprise.

In the days before World War II, it was possible to maintain the active Army by volunteer means. Under those conditions the Army could get along with little conscious effort devoted to explaining itself either to itself or to the public. But times have changed radically. Today, because of world tensions, we must maintain an Army of greater size than can be accomplished by voluntary service. This involves two concepts that are traditionally unpopular with the American people—a large standing Army and peacetime conscription.

The majority of the people in the Army today, both officers and men, are in it not by choice but by force of circumstances, and are hence far more critical than was the volunteer. Today's Army is composed largely of officers and men of short terms of service as compared to the former Army. Because of the worldwide distribution of the Army today and the necessity of maintaining rotation, units have lost their old-time stability. Hoped for rotation by units, to be expected soon, will ameliorate but not cure this condition. The junior officers, upon whom the Army must rely so greatly to present the Army to its enlisted ranks, are themselves mostly officers of short periods of service. The increased size of the Army and the demands of strategic deployment force many units to be stationed where housing and other facilities are far below the standard of former days. Furthermore, these conditions seem destined to continue for many years to come. All these factors combine to make of the information function one of the most demanding and most challenging to Army leadership today.

The solution to this perplexing problem lies in a reorientation of Army thinking throughout all ranks. The importance of the information function and the proper methods of performing it at all levels must be learned. This calls for Army acceptance of the philosophy of information already demonstrated by industry and by some outstanding commanders of units, and for the progressive presentation of this philosophy throughout the Army school system. Officers must be prepared to fill an

information staff position as capably as any other staff position. Competence in such an assignment must be rewarded in exactly the same manner as competence in any other assignment, and incompetence dealt with as firmly as in any other field. Commanders at all levels must be made aware of their responsibility in regard to informing their troops and the public. They must be shown the wonderful opportunity that a properly performed information job opens up to them in the form of more proficient units and of greater service to the Army and the country.

In contemplating any action, commanders and staff officers at all levels must learn to consider its effect upon the troops and the public, and to take appropriate steps to insure an adequate understanding of any action directed. An Army that is able to demonstrate to its own personnel, first of all, that it is performing honestly, intelligently and in the best interests of the Nation will have far less occasion to worry about its acceptance by the public at large. By giving proper attention to the performance of the internal information task, the performance of the external information task will be greatly simplified and the prestige of the Army in the eyes of the public will rise to a level never before known.

In the care of materiel and equipment, most officers have learned the importance of preventive maintenance. Far too few have become aware of the necessity to practice "preventive" troop and public relations. Whether concerned with maintaining a motor vehicle in operating condition or maintaining good human relations either within or outside the Army, certain positive measures are necessary if trouble is to be prevented. It is the same principle as applied in the fields of health, sanitation and safety. Possible causes of trouble are sought out and appropriate action is taken to prevent their development.

In his memorandum of 4 June 1954 to the Department of the Army Staff on the subject of Army Troop, Public and Congressional Relations, General Ridgway emphasized this point by saying, "Sound policy decisions form the basis of all sound relations." This command function is thus seen to be the starting point for building any program of internal or external information activities in any organization. Through the process of reasoning in arriving at sound decisions, problem areas are identified. By acting thereon, questions are answered before being asked, rumor and misinterpretation are avoided, support

is developed, and mutual confidence is simultaneously generated.

In spite of prior planning and proper preventive measures, things do not always go right. The Army is composed of human beings, any one of whom may at times make mistakes. Occasionally an individual will reflect discredit upon his unit and the Army. Unexpected contingencies will arise. Not every individual can be pleased by every action. Every commander must be alert to the development of any adverse troop or public relations and be prepared to take prompt and resolute action to correct the deficiency. If the error is his, he must be big enough to admit it and make appropriate changes. In such cases admission of error is a sign of strength rather than of weakness and will go far to raise him in the esteem of others.

If, on the other hand, the course of action has been properly determined and found to be necessary, whether popularly received or not, he must be prepared to stand resolutely by his decision. In such cases, respect will generally be created, even among those who criticize. If a member of the command has committed an offense, prompt and effective disciplinary steps must be taken. By all such corrective measures, Army leadership will grow in stature in the eyes both of troops and public.

Any commander at any level, if he would succeed, must know his command and impress himself upon his command. He must know what his people are thinking, anticipate their questions, answer those questions before they are asked, and keep them thoroughly informed and imbued with a sense of purpose. Above all, he must set the example for his command.

Even though military service may not be especially popular in this country, the American people still like to be proud of their Army. They expect the soldier's conduct to be above reproach. This should be impressed upon every officer and enlisted man or woman to the end that their appearance and behavior in public may reflect credit upon the Army. After all, the public's opinion of the Army is affected largely by what it sees of the Army at work and play. Military personnel of all ranks must understand that the uniform bestows no special privilege upon the individual to do as he pleases regardless of others; on the contrary, that it places upon him a special obligation to show to the world that he is worthy to represent the country and the service it denotes. A soldier so instructed and fully informed regarding the Army and that particular part of it in which he

serves is the best possible agent for telling the Army story.

Officers must learn to seek, rather than to shun, contact with the public. They should be taught to take advantage of the opportunity afforded them to learn of the people and the places of the different areas of the world in which they serve. They should be encouraged to participate actively in the affairs of the communities in which they live. Officers so trained from the beginning of their careers will eventually assume their positions as commanders with a feeling of confidence rather than of awe regarding their public relations responsibilities.

The commander must know the community in which his command is located; in particular, he should become well acquainted with its leaders and the representatives of its various public information media. He should be aware of the trend of local public opinion and be especially alert to any change in that opinion as regards the Army in general and his command in particular. He should utilize every resource at his disposal to cement the friendliest of relations between the civilian public and the personnel of his command. Again, in this as in the field of internal relations, he must set the example for his command.

As General Charles P. Summerall once observed, "Men think as their leaders think." That is the challenge to Army leadership today. The attitude toward the Army with which thousands of men return annually to civilian life after service in the Army is a direct reflection of the leadership to which they have been exposed. A greater challenge to Army leadership would be difficult to conceive.

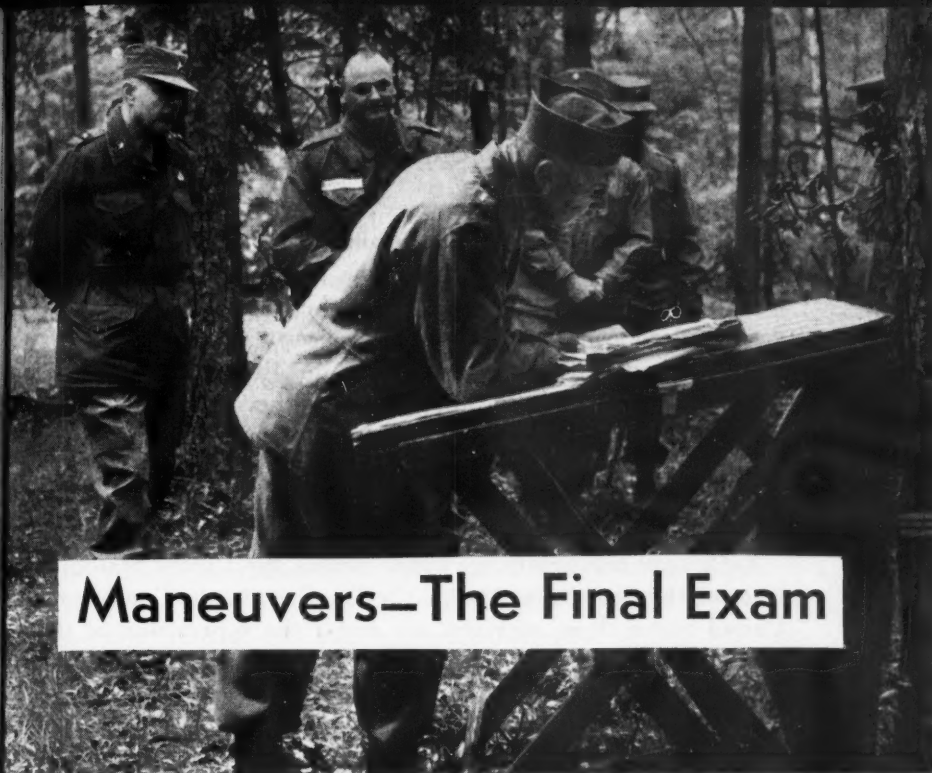
It is a common mistake to think of defense largely in terms of material things — guns and super bombs, planes, tanks, ships and all of the other complex paraphernalia of warfare. But these things are merely the tools which extend the capabilities of *men*. We must not lose sight of the fact that man himself remains the supreme element of victory in combat, the only absolute weapon. The tremendous advances of recent years have enhanced rather than diminished his importance, and they have placed a premium on quality of mind and character which is becoming higher every day.

Secretary of the Army Robert T. Stevens

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Maneuvers—The Final Exam

THE STORY is told that, during the most trying days of the Battle of the Bulge, an American general paused to talk with some troops who were fighting off a Nazi attack in the snow and slush. To his inquiry as to how things were going, a young sergeant snapped off a shot, emitted a stream of tobacco juice, and drawled "Well, I'll tell you, General, after them Tennessee maneuvers, nothing is very bad."

This typically exaggerated American brand of humor had more than a grain of truth behind it, for the maneuvers of 1940-41 really were the basic plans upon which were built the tactics employed by the United States and the Allies in their sweep through Europe. In this instance the maneuvers were virtually a rehearsal for the later actual battle.

Army maneuvers may be likened to the hard scrimmage of a football team in preparation for the big game or to the heavy sparring workouts of a prizefighter before he finally enters the ring to face a real opponent. A maneuver is the culmination of weeks and months of training of the individual, of individuals grouped in small units, of companies and battalions and divisions. It is the final examination of the men and units who have been undergoing schooling in the making of an Army.

At the same time the maneuver is a practical lesson in which all who participate learn many things. The individual soldier learns how to handle himself in the field, how to work with other individuals and groups as a member of a team. Small unit commanders learn how to act under pressure; regimental and division commanders gain proficiency in directing their units; support troops learn the importance of their individual tasks in keeping the fighting units going; and the fighting units in turn learn what to expect from the support units and how to handle themselves in combat. Staff officers, too, learn how their actions and decisions affect troops in the field.

Each year maneuvers are conducted in the United States, in Europe, the Caribbean, Alaska, the Far East. In the Continental United States these exercises are under the supervision of the Office of the Chief of Army Field Forces while overseas they come under direction of the theater commander. No matter where staged or under whose direction, all are carried on for the same purposes, and the details of planning, preparation, and actual staging are very much the same.

A maneuver may be defined as "a tactical exercise carried out at sea, in the air, on the ground, or on a map in imitation of war. It involves two opposing sides, one of which may be imaginary." Field maneuvers are exercises in which military operations are conducted on the ground, the troops and the armament of both sides being actually present, either wholly or in part, and all the conditions of actual war being simulated.

A field exercise (FEX), on the other hand, is an exercise conducted in the field under simulated war conditions in which troops and armament of one side are actually present in whole or in part, while those of the other side are imaginary or outline. When the troops present consist only of command, staff, and communications personnel, the exercises are termed command post exercises. They may be one or two-sided.

Two types of maneuvers are developed in the FEX. One is "controlled", the other is the "free" maneuver. In the former, as the name suggests, situations are set up in advance to test both individuals and units in predetermined problems or along specific training lines. The situations are not revealed to the "friendly" forces so that judgments can be made on how the various problems are met or overcome by commanders and men.

In the free maneuver, "friendly" and Aggressor troops are

presented with merely general limitations within which the action unfolds as in a fluid battle situation.

A FEX—controlled or free—may be utilized either to test strategical planning or for solving various tactical problems. A maneuver thus may range from small unit field exercises to those involving an entire Field Army.

Preliminary planning for a large maneuver begins as much as two years in advance. In both Continental United States and overseas, schedules of proposed maneuvers are drawn up in time for necessary financial arrangements. After budgetary acceptance, the commanders of troops concerned must be notified so they can begin making their plans. An Exercise Director is named for all field exercises and large scale maneuvers. He receives a directive stating the dates, location, purpose of the exercise and notice of the units to be employed. He and his staff check over the terrain and select the areas best suited for the purpose of the maneuver.

A plan for the exercise is then prepared. If the maneuver is "controlled," the Director prepares the plan in much the same way that a television program director would prepare for everything required in his production. In fact the military plan also is called a scenario. It outlines in detail every phase of training that is to be emphasized, and it sets forth just exactly what is going to happen—a dawn attack on a certain day, an ambush at a certain hour, and so on. The essential difference between a stage or television show and a military maneuver, however, is that the "friendly" forces are not given a script. The Director must anticipate and prepare for any one of the many possible developments, just as in combat. The idea is to see how well the troops and their leaders respond to a particular situation.

In working out the plot of the controlled maneuver, the Exercise Director and his staff strive constantly for realism. This may range from providing distinctive uniforms for Aggressor troops to an intelligence plan detailing just how much information concerning Aggressor dispositions and strength the friendly troops are to be allowed.

A free maneuver does not call for the same amount of detailed advance planning, since this consists of friendly forces facing Aggressors with only general limitations imposed. In this less frequently employed type, commanders have considerable leeway in directing activities of troops.

In any type of exercise, selection and training of umpires is important. Whenever possible the Exercise Director appoints umpires who have had some experience in the type of problems posed by the maneuver requirements. Qualified individuals are sent to an umpire school for intensive training. The chief umpire usually prepares a control plan setting forth in detail how he and his assistants will regulate and score the coming exercise.

The umpires (varying in number from one to several hundred, depending on the scope of the maneuver) actually control the exercise—not in the sense of managing the troops but by insuring adherence to time tables, by seeing that the Aggressors take action to create the desired problem. They insure that troops do not advance over a “blown” bridge or do not charge through a “mine field” without taking the time to clear a path, and the like. The umpires also assess casualties. While exercising this control, the umpires must be certain that the initiative and ability of the commander to act is not impaired or hindered.

A maneuver may be run off without break or in a series of phases. The latter method allows effective control and a more careful analysis of each separate action. This also allows opportunity for on-the-spot critiques and explanations of activities to the troops immediately involved.

After the Maneuver Director has assigned his staff and established his headquarters, a maneuver plan is prepared, umpires are selected and trained, and service units are brought in to organize the area. The tactical units then are brought into the area where they engage in some specialized training and orient themselves to the situation. The tactical exercise itself follows.

After the maneuver is completed, the Director conducts a detailed critique describing the entire play of the exercise and pointing up special problems that have arisen. This formal critique is in addition to the field discussions that may have been conducted by umpires and field directors for benefit of the troops. From the ensuing formal reports come recommendations on future maneuvers, on Tables of Organization and Equipment, even proposals for modification of manuals, doctrine and methods of training. Thus the maneuver serves not only as a final examination and a training instrument in itself, but as a guide for future training, as the Army strives constantly to keep its troops in a state of readiness.

Who
are
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free



The Maneuver Story

Wherever large bodies of American troops are stationed, maneuvers are staged to test strategic conceptions, new doctrine, practical tactics. Above all, the field exercises give added training to troops, whether in the mountains, in town fighting, open country, the jungle or in the freezing wastes of the sub-Arctic.



Units Already Trained in Teamwork...

Individual soldiers trained in small units learn the large lessons of teamwork in groups all the way up to army level. At the same time officers get valuable lessons in leadership and close co-operation.



Are Welded Into a Striking Force...



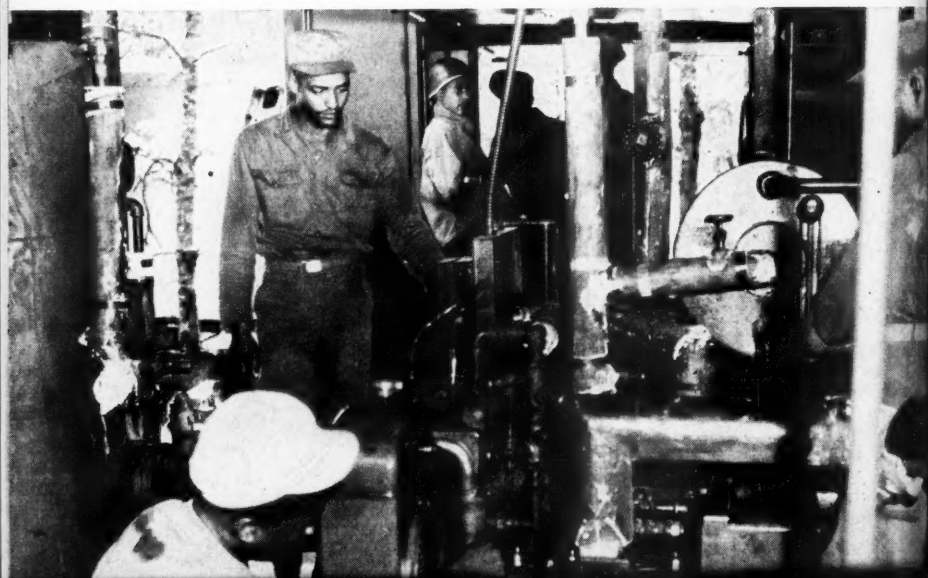
The trio of Infantry-Artillery-Armor, representing the mobility and formidable fire power of the American fighting team, demands intensive training. Officers and men alike learn how the team works when they take part in maneuvers.





And Assisted by Supporting Units...

The striking forces learn the importance of the technical and administrative branches, while personnel in those organizations gain actual field experience in their numerous and important duties, keeping the striking forces supplied, fed, mobile and in all other ways able to function.





...Take the High Ground

D/A Organizational Changes

ASSISTANT SECRETARIES

General Order 64, Department of the Army, redesignates the Office of the Under Secretary of the Army as the Office of the Assistant Secretary of the Army (Logistics and Research and Development). All authority, powers, and duties heretofore assigned or delegated to the Under Secretary of the Army in this functional area are assigned to the Assistant Secretary of the Army (Logistics and Research and Development).

The Office of the Under Secretary is reestablished without specific assignment in functional areas. The Under Secretary of the Army will act as the deputy to the Secretary of the Army.

The Office of the Assistant Secretary of the Army (Civil-Military Affairs) is established. The authority, powers, and duties heretofore assigned or delegated to the Assistant Secretary of the Army (Financial Management) pertaining to politico-military affairs, civil functions, Canal Zone affairs, Air Coordinating Committee, and related matters, excluding budget responsibilities, are assigned to the Assistant Secretary of the Army (Civil-Military Affairs).

The authority, powers, and duties heretofore assigned or delegated to the Assistant Secretary of the Army (Manpower and Reserve Forces), and to the Assistant Secretary of the Army (Financial Management) except for those functions assigned to the Assistant Secretary of the Army (Civil-Military Affairs) above are not affected by this General Order.

DEPUTY CHIEF OF STAFF FOR LOGISTICS

The position of Deputy Chief of Staff for Logistics, Office of the Chief of Staff, is established by Department of the Army General Order 66, and his responsibilities are published in SR 10-5-1, change 4, dated 8 September 1954.

The Deputy Chief of Staff for Logistics is under the functional supervision of the Assistant Secretary of the Army (Logistics and Research and Development) and under the direct supervision and control of the Chief of Staff.

He has Department of the Army Staff responsibility for logistics planning; development and supervision of the logistics programs; and within budget policies

developed by the Comptroller of the Army, formulation of those portions of the annual military budget of the Army which pertain to logistics programs. Within policy and standards developed by the Comptroller of the Army, he develops and supervises Financial Property Accounting, Stock Funds, and Industrial Funds; and Performance Analysis in connection with logistic activities. He also formulates policies and evaluates results in matters of logistics requirements, procurements, supply, services, and materiel activities.

Within over-all Department of the Army policies, he directs and controls the technical staffs and services in all matters covered above; and also—

- Prescribes the missions, organization, and procedures of the technical services.

- Supervises the training conducted under the jurisdiction of the heads of technical services.

- Develops career management policies for military personnel in the technical services.

- Exercises manpower control over military and civilian personnel in the technical services.

- Administers civilian personnel of the technical services.

- Develops and supervises budgeting, funding (including allotting of funds and allocation of personnel ceilings), accounting, other financial and fiscal activities, performance analysis, review and analysis, and reports control of the technical services.

- Supervises and correlates financial management and financial operations in the technical services.

- Develops policies for and supervises industrial and labor relations in the technical services.

Within policy and programs developed by the Deputy Chief of Staff for Plans and Research, he directs the research and development activities of the technical services. On matters of health, medical care of troops, and utilization of professional military personnel, The Surgeon General has direct access to the Secretary of the Army and the Chief of Staff. The responsibilities assigned above do not extend to the civil functions of the Chief of Engineers.

First All-Army Talent Contest



Ed Sullivan meets with Major General John A. Klein, The Adjutant General, to complete arrangements for the All-Army Talent Contest.

LIGHTS BLAZED, cameras turned, a studio audience applauded, and some thirty-five million Americans watched on their living room screens as contestant after contestant—twenty-four in all—was presented on one of the country's big television shows.

The scene was the last act of the First All-Army Talent Contest, being staged on the "Toast of the Town" over Columbia Broadcasting System with Ed Sullivan acting as master of ceremonies.

The "live" audience and television watchers saw a swiftly moving, dynamic show. They saw a panel of judges select the winners. Then they saw Major General John A. Klein, The Adjutant General, present the four winners with "Oscars" while all of the finalists received trophies and a certificate from the general plus a hundred dollars from Mr. Sullivan.

Reaction to the show was immediate. Switchboards were flooded with telephone calls and hundreds

of letters of congratulations were received by Mr. Sullivan.

As great as the impact of the show was on the public, however, it was merely the apex of a gigantic pyramid whose broad base extended all through the Army. About ten thousand Army members in all Army commands except Trieste took part.

Thousands of soldiers were entertained as the contest unreeled. Many commands formed travelling units to bring an evening of relaxation to organizations in isolated spots.

And while entertainment and relaxation were the prime objectives of the entire contest, it paid off in improved community relations as well. Thousands of civilians viewed the competitions as guests of the Army. They came away with a new respect for an Army trained primarily for fighting but which is still cognizant of man's desire for cultural development.

"Operation Paper Saving" Results in

Streamlining Army Regulations

Colonel Roy N. Walker

WHEN, as so often happens in the course of Army events, it becomes necessary to "Look up the regulation," commanders of companies, battalions and similar sized units will find their task vastly eased because of recent action to consolidate existing Army Regulations and Special Regulations, and to change distribution schedules of the new matter as well.

No longer will the company officer have to wade through masses of material in order to find that which is pertinent to his particular command, nor will the company clerk have to file and maintain material that contains nothing of import for his unit. No longer will the company grade officer be forced to refer to several publications in time consuming consultation.

An Army-wide program known as Operation Paper Saving, which became operative 1 October 1954, is designed to eliminate all of these bottlenecks, making the task of keeping up with Army directives much simpler. In effect, the new procedure:

- Consolidates Army Regulations and Special Regulations into one media—Army Regulations. This will be accomplished over a period of time as such publications are changed, revised or rewritten.
- Results in distribution of administrative publications on a "need to know" basis with particular reference to requirements of companies, battalions and units of comparable size and responsibility.
- Presents material written "from the bottom up"—as contrasted with the former arrangement "from the top down"—to facilitate extracting that portion of voluminous regulations applying to smaller units.

COLONEL ROY N. WALKER, Adjutant General's Corps, is Chief, Publications Branch, Office of the Adjutant General.

- Extracts those parts of lengthy regulations which apply specifically to the small unit, so that such organizations may have them immediately and handily available.
- Insures that regulations are prepared on broad lines to allow greater latitude and freedom in application by field commanders.
- Establishes definitely The Adjutant General's authority to determine final distribution requirements.

The new plan—a product of intensive study by the Publications Branch of the Adjutant General's Office—will result in a saving to the taxpayer of some half million dollars annually. It will eliminate more than fourteen thousand pages of printed matter now being distributed to about five thousand units, for a net savings of sixty million printed pages, which represents about ninety-five tons of paper—enough to fill five freight cars.

While the new system may involve handling of more individual items by smaller units, it cuts down on the total number of pages that each company or battalion receives, and thus conserves space in filing cabinets. The very fact that more individual items now go to the small unit is one of the intended goals. A preliminary study by the Publications Branch had revealed that proper distribution was not being made to the small units of items involving their specific interest.

The decision to consolidate existing Army Regulations and Special Regulations is another step in the Army's continual fight to cut down on "paperwork", to simplify liaison between top policy makers and the field, and to make for greater efficiency throughout the entire Army Establishment. As a matter of fact the publication of SR's, which were first introduced during 1948, was itself another step in this over-all policy since they consolidated into one series all administrative operational instructions formerly contained in Readjustment Regulations, Mobilization Regulations, Department of Army pamphlets, and other publications. Thereafter AR's became the media for publication of basic policy and general instructions while SR's were utilized for operational and procedural instructions.

At the beginning of Fiscal Year 1955, there were 576 Army Regulations and 1771 Special Regulations in effect. A total of 621 of these SR's were directly related to the AR's while the remainder, 1150, are not so related. Thus the consolidation under Operation Paper Saving means an immediate elimination

of 621 items and in all, a total of 1726 Army Regulations that are current.

That, however, is not the only direct and immediate savings. The Adjutant General's Office now is authorized to prepare extracts of lengthy Regulations—in other words, these may be broken down into two parts, one for the small unit, the remainder for the larger units that need them. Thus the small unit need no longer receive the entire Regulation, the bulk of which may pertain exclusively to a higher headquarters. The two portions are numbered the same, but with a suffix A or B to designate them. The size and numbering system continues as before.

As a result of this distribution on a "need to know" basis, the small unit commander now is in a better position than ever before to advise personnel of his command and to assist them in all types of personal problems, particularly with reference to the individual soldier's privileges and prerogatives. Each unit commander will now have readily available all those portions of Army Regulations which are pertinent to his company administration. This is furthered by a new method of editing so that instructions applicable to the lowest level of command follow immediately after the index and introduction.

Not only is the arrangement of contents being revised, but historical and other background matter henceforth will be omitted. As new Regulations are drawn up, they will be prepared on broad lines allowing latitude in application by field commanders. The directives thus constitute a framework within which the initiative and prerogative of the commander may be used to the best advantage in practical local application. A directive such as an Army Regulation is not restrictive beyond the extent necessary to insure compliance with approved policies and provide for necessary uniformity.

Determination of distribution now rests with The Adjutant General. Previously the lack of a definite delegation of authority in this area made it impossible to fix responsibility and effect corrective action in case of faulty distribution. The new system does not, however, make actual distribution in the field the sole responsibility of The Adjutant General. Stimulation of command interest in the distribution of publications is considered essential to achieve desired results.

An analysis of the distribution problem shows that there are

20,424 units in the Active Army, National Guard and Army Reserve (including more than half of these in the Active Army) to which material must be sent. Previously separate companies were placed in the same category with larger units and no distinction was made between non-administrative and administrative battalions. This was determined to be both excessive and inadequate since certain instructional material went to units that did not require it—and the reverse also proved true.

As worked out by the Publications Branch, the new distribution formula therefore now consists of:

- A — Regulations of general application to be distributed to all units and headquarters down to and including companies, batteries, units and headquarters of comparable size.
- B — Regulations of limited application to be distributed to all units and headquarters down to and including separate battalions (administrative) units, and headquarters of comparable size and responsibility.
- C — Regulations of limited application to be distributed to all units and headquarters down to and including divisions, units, and headquarters of comparable size. (Class I and II installations and Class II activities located off an installation are included.)
- D — Regulations to be distributed to Department of the Army agencies, Chief of Army Field Forces, Army headquarters, and headquarters of major oversea commands.
- S — Regulations of limited application to be distributed on a selective basis, as determined by The Adjutant General.

The distribution established above is only a guide. Close and continuing supervision from supply points to using units is a command responsibility.

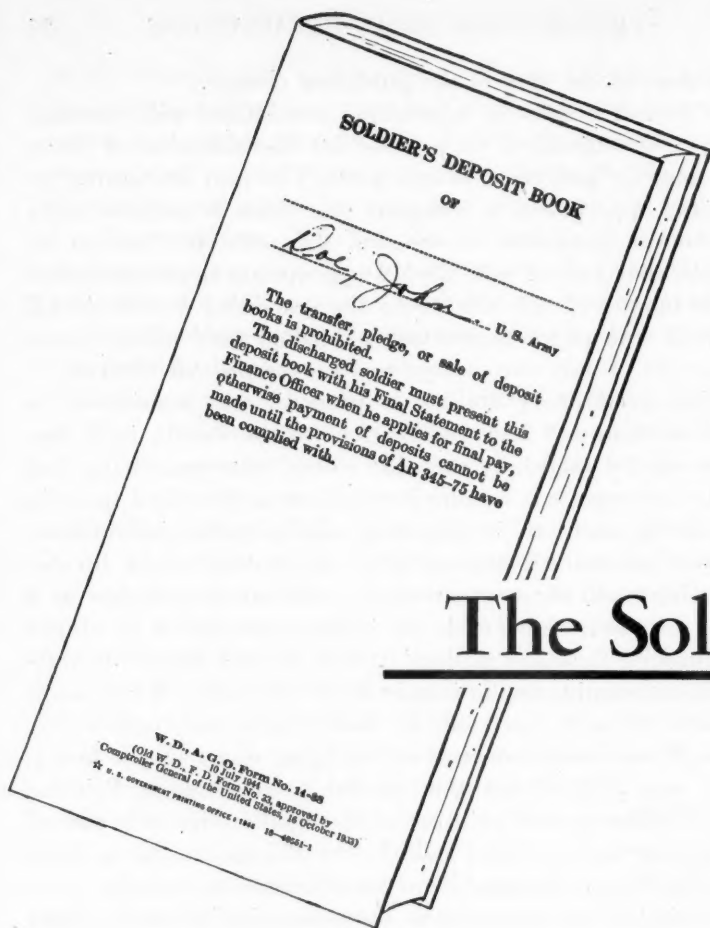
Changes in the distribution formula are being accomplished over a period of time as new regulations are issued and existing ones are revised and republished. Changes to existing regulations dated prior to 1 October 1954 will, however, be kept to the absolute minimum. When the time element precludes a complete rewrite of the subject matter under the new concept, changes to existing regulations may be published as a temporary expedient. Under such circumstances a complete rewrite of the publication will be submitted to The Adjutant General within

ninety days of the date of the published change.

The former system of numbering regulations will continue in effect, but modified to provide for identification of those which may be published in two parts. The part containing instructions appropriate to company size units is assigned suffix A while the remainder is assigned the suffix B. Thus as an example, that part of AR 310-110 appropriate to company size units is numbered AR 310-110-A; the remaining portion is AR 310-110-B. Except for regulations published with suffixes, numbers consist of only two groups, as for example AR 310-115.

During preliminary studies, a proposal was considered to convert existing 6x9 inch publications to the 8x10½ inch size. This would be especially valuable where diagrams, charts and the like are required; besides it would mean less shelf space in filing, and greater ease in presenting administrative instructions. However an analysis showed that conversion would involve purchasing some three quarters of a million new binders at a cost of fifty-four cents each—an initial expenditure of almost four hundred thousand dollars! It was decided instead to publish all forthcoming regulations in the 6x9 inch size. Where maps or charts are used, they will be folded to fit the smaller size. Although the immediate cost of changing was a major factor, it also was pointed out that available Government Printing Office facilities permit printing of the smaller size at a rate of five pages or less overnight and of 10 to 15 pages in two or three days. The larger size could not be processed as rapidly.

As desirable and necessary as the economies in money, paper and ink may be, the increase in efficiency and the greater ease with which field operations can be carried on, is even more important from a military standpoint. Operation Paper Saving is simply another manifestation of the efforts that are continually being made to enable the Army to fulfill its primary mission of being ready to defend the Nation.



The Soldier O

THE STACCATO, somewhat rollicking sound of "Pay Call" may be unfamiliar to the soldier of today's bugleless Army but even so, pay day still carries the same connotations as in the days when the musical notes signalled the visit of the paymaster to remote frontier posts. Many a serviceman today, watching the sums add up in his Soldiers' Deposits book, may not realize that the plan under which he saves originated in the Army's Indian-fighting days.

Few institutions in the entire Army have had as long a continuous existence as Soldiers' Deposits. But since the sub-

CAPTAIN WOODROW B. ANDRESEN, Finance Corps, is Technical Liaison Officer, Office of the Chief of Finance.

Since the days when a small Army guarded a vast frontier from marauding Indians, to the present time, many an enlisted man has regarded this record form as

er BOOK OF THE MONTH

Captain Woodrow B. Andresen

ject of savings lacks the drama, color and story telling potentialities of other phases of Army life, the whole idea is little publicized.

Even in the days when pay day meant a half holiday in the "old Army" and when many a soldier personally fostered the legend that he was a free-spending, devil-may-care sort, the record shows that the plan was widely used. Within a year after it was inaugurated in 1872, some four thousand soldiers (out of an Army of about twenty-five thousand) had saved no less than \$209,850. At the height of World War II, 649,355 enlisted persons had on deposit a total of \$213,165,808. That was, of course, a peak corresponding to the record number of personnel enrolled in the Army. Today the latest available figures show that, as of June 1954, about 435,000 enlisted men and women have \$47 million on deposit.

When this soldiers' saving system was first established by

the Congress on 15 May 1872, there were no family allotments nor were there Savings Bonds or any other convenient means by which the enlisted man was able to save. Actually the plan had a double-barreled purpose—to encourage savings and to cut down on desertions in the post-Civil War Army. It was stipulated that the United States Treasury would pay four percent simple interest on deposits, but that the money could be repaid to the individual only at the end of an enlistment or discharge from the service or, upon death, to his survivors. In case of desertion, any sums on deposit would be forfeited. Thus with the opportunity to deposit his surplus cash where it could not be drawn out for some frivolous reason (and with the added factor that if he deserted he would lose it), many a soldier saw the wisdom of participating in the plan by depositing each month a large part of his small pay.

Only recently, with the enactment of Public Law 501-83d Congress, the deposit plans of the Army, Navy, Marine Corps and Air Force were made uniform. Besides repealing any existing requirements for forfeiture in cases of desertion, the Act provides that "deposits and interest thereon shall be exempt from liability for . . . enlisted member's debts, including any indebtedness to the United States or to any of its instrumentalities, and shall not be subject to forfeiture by sentence of court-martial."

Today's problems may differ from those of frontier days, but the Army, acting through the Finance Corps, is just as interested now as then in promoting the saving habit among its enlisted personnel. In a recent letter to theater commanders world-wide, Major General B. E. Sawyer, Chief of Finance, noted that in today's Cold War, "money is one of many weapons employed by both sides."

"The Army savings program definitely is linked to the economic aspects of our world-wide struggle," he pointed out. "The existence of surplus American spending money in overseas areas materially assists the forces opposing our Nation. Among the ways by which the enemy benefits from the existence of surplus United States money in foreign lands are these:

"United States money taken from combat casualties can be used directly to finance espionage and sabotage, and indirectly to undermine the United States through devious economic maneuvers.

"Surplus spending money in the hands of United States service members in friendly foreign countries contributes to inflation in those countries.

"Surplus spending money in the hands of United States service members who are in frequent contact with troops of other friendly nations tends to create a severe morale problem among the latter troops, thus endangering the common effort of allied nations."

From the standpoint of the individual, the Soldiers' Deposits plan is only one method whereby spending power can be saved against the day it will be needed. The individual soldier can now authorize the Finance Corps to send his monthly pay direct to a bank; he can authorize regular allotments for Savings Bonds, for commercial insurance, for direct dependency allowances, or for any combination of these. Because of this, the Army does not unduly emphasize Soldiers' Deposits over any of the other savings opportunities currently available. For many individuals it may be much easier to authorize automatic monthly deductions from one's pay, whereas to participate in the Soldiers' Deposits plan it is necessary to deliver the actual cash to a Finance Officer. Yet despite this, the use of Soldiers' Deposits continues to grow.

Just as in the beginning, the individual soldier may deposit a minimum of five dollars or a maximum of three months pay and allowances at one time. Interest is paid (on money deposited at least six months) at four percent per year simple interest—that is, the interest is not compounded annually or semi-annually as in most commercial banks. Under provisions of Army Regulations 35-1550, the individual may withdraw his money only upon discharge or retirement, upon being transferred to an inactive status at the end of a three-year enlistment, or at the end of every three years if on an indefinite enlistment. The regulation also makes provision for withdrawal in case of actual emergency where health or welfare of the person or his family may be involved—but this does not include such "emergencies" as automobile repairs, for example. Interest is computed at the end of each three year period; thus by redepositing principal and interest, an individual may receive interest which is scarcely less than if compounded annually.

In case of the death of a participant the money, plus interest due, is repaid to his heirs or representative. The money on



Modern business machines are used to verify entries in Soldiers' Deposit records at the Army Finance Center.

U. S. Army Photograph

deposit may not be claimed by creditors, nor is it subject to attachment in case of a legal action. It may not even be seized by the Government in case the individual deserts or is fined by court-martial—unless he stipulates that it may be used for such purpose or to repay any other debt to the Government.

Keeping track of the funds on deposit is one of the tasks of the Finance Corps. When a soldier wishes to make a deposit, he gives the money to his personnel officer who makes the necessary entry in the deposit book. The personnel officer then transmits the cash and the deposit book to the finance officer for signature. Each month the local finance officer reports all deposits to the Soldiers' Deposit Division of the Army Finance Center at Fort Benjamin Harrison, Indiana. The division maintains an individual record of deposits and withdrawals for each depositor. It also processes and settles claims for deposits that were not repaid to the depositors at time of discharge.

All monies received for deposit are covered into a U.S. Treasury trust fund entitled "Pay of the Army, Deposit Fund." Deposits are repaid from this fund. However, interest on de-

posits is paid from public funds appropriated each year under "Other Military Personnel Cost," which is a subdivision of the appropriation entitled "Military Personnel, Army."

Although the United States Army plan has continued for 82 years in practically unchanged form, the idea of encouraging soldiers to save has an even more remote precedent in the legions of ancient Rome. Each Roman legion was divided into ten cohorts, and in each cohort a fund was established with a junior officer in charge. It was stipulated that this officer be chosen for his honesty and integrity; and certainly clerical ability also was required since he was responsible to each man personally. A small portion of each cohort fund went into a legion fund for defraying expenses of those who were killed or died while in service.

One vast difference between the Roman system and that of the United States Army was that theirs was involuntary—each man had to deposit half his salary. On the other hand, the United States Army considers the Soldiers' Deposit plan an investment in people. The fact that it pays a comparatively high interest rate and that the entire plan is voluntary, attests to that. Above all it provides every enlisted member with a safe, secure method of building a nest egg for retirement.

Money Matters

The Finance Center's monthly mailing of Class Q and Class E checks is staggered in order to level the workload and get money to allottees with the least possible delay. Class Q checks are mailed by the second working day of each month, while Class E checks are released to the Post Office no later than the fourth working day of the month following that for which payment is due. Checks or payment authorizations for allottees in foreign countries are sent out in bulk to each country concerned, with a dispatch deadline of the twenty-fifth calendar day of each month. Monthly checks to retired members are dispatched on the last day of each month.

MILITARY PAYMENT CERTIFICATES. AR 35-510 stipulates that military payment certificates will be used for payments to United States and other authorized personnel, and as the official medium of exchange for all transactions within establishments of the Armed Forces of the United States in the following areas:

Austria	Italy
Belgium	Iwo Jima
France	Japan and outlying Islands
Free Territory of Trieste	Korea
French Morocco	Philippine Islands
Germany	Ryukyu Islands
Greece	Tripoli
Iceland	United Kingdom
	Yugoslavia



**Neither blizzards, sub-zero temperatures
could prevent the Alaska Communication
building to ever increasing significance**

Lifeline to the North

Master Sergeant Edwin C. Nichols

SINCE THE YEAR 1900, the Alaska Communication System (ACS) has been quietly and efficiently performing a vital mission—that of providing communications for the military, territorial and Federal agencies and the civilian populace to, from and within the Territory of Alaska. To Alaskans who have watched the System develop into a vast communications agency in a little over fifty years, the letters ACS are synonymous with the growth of Alaska itself.

Recent news announcements about projected submarine cables, designed to strengthen and improve communications ties between Alaska and the United States, have focused public attention once again on this vital northern frontier of America, and on the essential role which ACS plays in Alaska's defense.

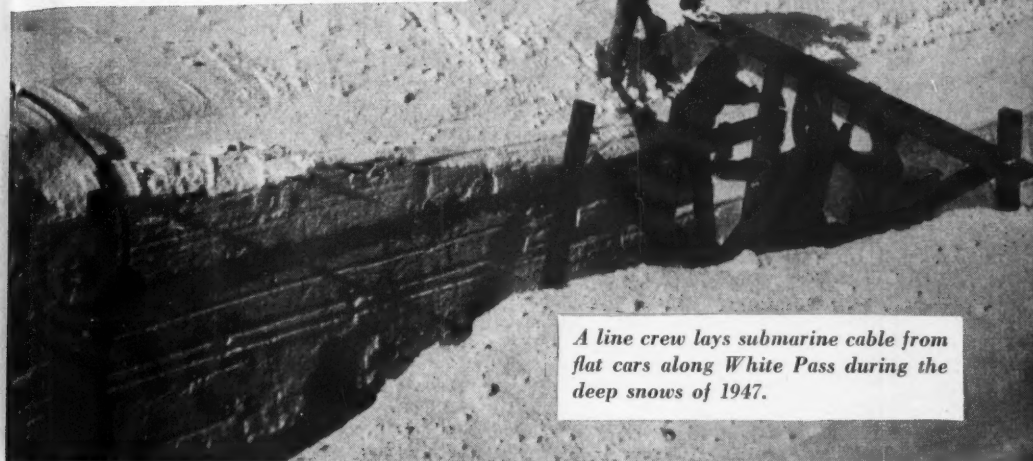
For a better understanding of ACS and how it came into being, it is necessary to revert to the gold rush days of 1896 to '98. During those years, thousands of prospectors stampeded to Alaska and close on their heels came gamblers, robbers and other lawless elements. Reverberations of the strife and killings

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A line crew lays submarine cable from flat cars along White Pass during the deep snows of 1947.

in the roaring gold camps, echoing in the halls of Congress, brought quick action. Forts were built and garrisons established at several locations in the Territory. Lack of Signal communications—it sometimes took as much as one year to relay a message from Alaska to the United States and obtain an answer—made administration of these garrisons extremely difficult.

To remedy this situation, Congress on 26 May 1900 provided \$450,550 to construct military telegraph and cable lines connecting headquarters, Department of Alaska at Fort St. Michael with other military stations in Alaska. The act provided for handling of commercial business over these military lines under such conditions deemed in the public interest by the Secretary of War. Thus under the name of the Washington-Alaska Military Cable and Telegraph System, the Alaska Communication System was born.

Brigadier General Adolphus Washington Greely, then Chief Signal Officer, was provided with authority and funds to bring to life his dream of a communications system that would tie together the garrisons of Alaska, and eventually connect them with Washington. Hard-hitting Elihu Root, Secretary of War in the cabinets of William McKinley and Theodore Roosevelt, furnished political support.



A rude hut, one of the early ACS stations, contrasts with the recently completed toll building at Anchorage, below.

U. S. Army Photographs



General Greely provided the required forceful action. He was soon on his way to Alaska to supervise the great task personally. The rugged country was only a challenge to the General's iron personality and constitution. He went wherever his men went, through swamps, over mountain trails and across rivers, winter and summer. There was nothing his men had to do that the General could not do himself. He slept in the field, ate the same rations, worked tirelessly with them. Knowing their problems, he pushed through recommendations that Alaskan service count as double time for retirement; for relief from Alaskan duty after two years; and for increased rations for the men who, during the first years, had to exist on the same rations as servicemen in more temperate areas.

The small band of Signal Corps pioneers endured incredible hardships. They fought clouds of mosquitoes and flies. They chopped their way through brush on the slopes and, sinking knee-deep in muskeg in the valleys, they struggled slowly forward, leaving the wire strung behind them.

Muskeg, a spongy moss with water lying but a few inches below the surface, was their worst enemy, for it stole strength from them at every step. Writing in 1901, Captain Frank Greene thus described the hardships of Alaskan work: "The seasons have seemed to conspire against telegraph construction, the ground being almost impassably boggy in the fall, the cold intense (-72° F) in the winter, the snow soft and deep in the spring, and now, in the summer, hordes of appalling, ferocious mosquitoes drive the men of the working parties to the verge of insanity."

The Fort St. Michael-Fort Gibbon section of the line was completed in November 1901, and for several days (before the cable across Norton Sound was broken) direct communication was possible between Fort Davis at Nome, Fort St. Michael and Fort Gibbon, by a combined land line and cable system 605 miles in length. Previous mail time between these points was twenty-nine days.

When the submarine cable between Fort Safety and Fort St. Michael was broken for the second time by the action of the polar pack, General Greely turned to the new science of wireless telegraphy. To Captain Leonard D. Wildman goes the credit for the modification of existing wireless systems to fit local needs. His early wireless stations were of the spark type.



Lieutenant William "Billy" Mitchell traveled on snowshoes to inspect early telephone line construction.

U. S. Army Photograph

The sending key was a heavy metal bar a foot and a half long to which was attached a hard rubber handle. After six or eight messages, the operator was forced to shut down the transmitter and file the contacts, which were pitted by the arc that formed each time the key was opened.

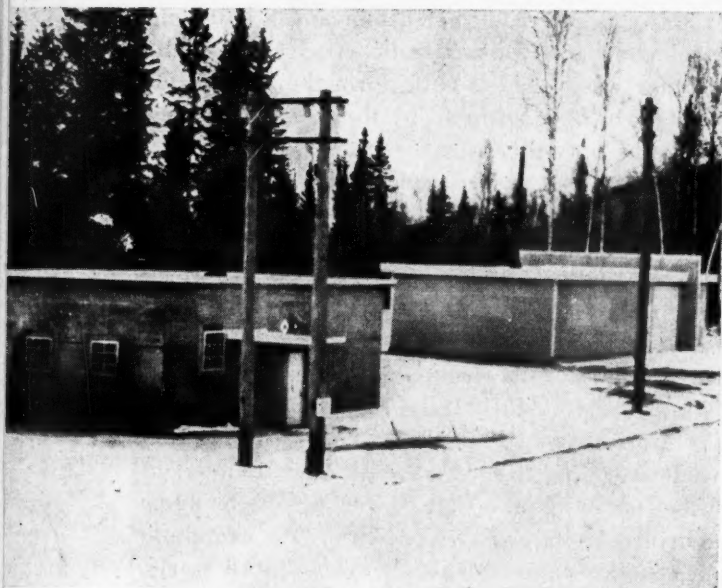
ACS was probably the first wireless telegraph system in the world regularly operated as part of a telegraph system handling commercial messages. Certainly, no other point-to-point wireless channels were in commercial service on the American continent at that time.

In the autumn of 1901, a trouble shooter was needed in the Alaskan construction work. First Lieutenant William Mitchell (later to attain fame as General "Billy" Mitchell) was summoned from the tropics and sent to Alaska. With Captain George C. Burnell working from the south and Lieutenant Mitchell from the north, connections were made, bringing Valdez and the Prince William Sound country into communication through Canadian circuits with the rest of the world.

This great length of wire, running entirely through uninhabited wilderness, was maintained by detachments of soldiers stationed at log cabins every forty miles along the line. A sled and dog team, usually of seven dogs, was provided for winter transportation. War Department orders stipulated that the men must travel in pairs, because of the danger of traveling alone through the uninhabited country where temperatures ranged as low as -60° to -70° F.

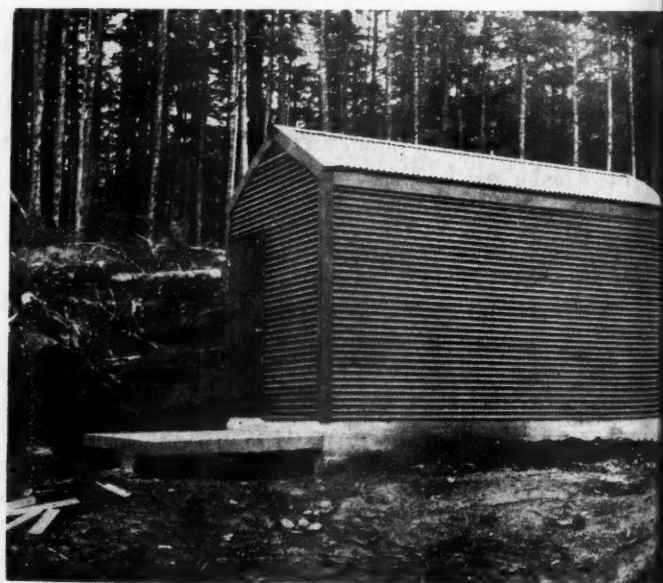
By the summer of 1903, the United States possessed a telegraph and cable system that linked all the military garrisons of Alaska, with the exception of Fort William H. Seward at Haines, and connected these garrisons through the Canadian government lines with Washington. Linked also in this communications net were the cities of Nome, Rampart, Eagle, Valdez, Skagway, Juneau and many lesser towns. This net was a vast improvement in communications over the days, only three years before, when inter-garrison messages took months. But there was a weakness. All "outside" messages funnelled through Fort Egbert near the Canadian border.

Secretary of War Root was determined that the Territory be connected to the United States by an all-American cable system. His arguments were so forcefully presented that Congress on 3 March 1903, appropriated \$485,000 for a submarine



Two types of ACS repeater stations—above, the Harding Lake repeater station for overland lines; below, a submarine cable repeater building at Point Glass, southeast of Juneau.

U. S. Army Photographs



cable to connect Juneau, Alaska, with Seattle, Washington. In April 1904, an additional \$321,580 was appropriated to extend the cable to Fort Liscum.

The first part of General Greely's dream of an Alaska communications system had been realized. Now he seized on this new opportunity. Orders flew from his office. This job, too, must be completed in record time. The winter storms of 1903 loomed only a few months distant, and installation of the cable before weather forced deferment of the project to the summer of 1904 seemed impossible. It was the urgent desire of Secretary Root and the determination of General Greely, that at least one section of the cable should be in operation by December 1903.

Everything seemed to conspire against that deadline. The only cables under military control, the *Burnside*, was being repaired in Shanghai when the project was decided upon, and the condition of the Philippine cables demanded her presence there for a time after her repairs were completed. The sea bottom between Juneau and Seattle was unsurveyed. Heavy rain, wind and storms of southeastern Alaska, abetted by the short days of winter, limited cable work from May to September. Neither the complicated machinery for handling cable nor the delicate instruments for operating it could be obtained in America. Construction, installation and operation of long submarine cables had previously depended on foreign skill and capital, on foreign-trained operators, and on British cable machinery—itsself the product of forty years' evolution.

Despite all obstacles the project was completed as planned and General Greely was able to write in 1904: "The completion of the Alaskan lines perfects the military intercommunicating system of the United States. The President or the Secretary of War can now reach, over strictly American lines of telegraph and cable, every important military command from the icy waters of Bering Strait to the tropical seas of the Sulu Archipelago, with the exception of the legation guard at Peking."

From 1904 to the beginning of World War II, the story of the Alaska Communication System is one of steady technical advancement interspersed with bizarre and colorful episodes peculiar to the northland. Such occurrences as a moose entangling his antlers in the pole line, or a humpback whale becoming enmeshed in the Valdez cable at the mouth of Sitka



Signalmen check the lines along a newly constructed stretch of the Alaska Communication System during World War II.

U. S. Army Photograph

harbor, were accepted as routine by System personnel. The thrashing of the whale had ripped, shredded and tied the cable into knots. The cable still functioned, though, even after the whale's death; but when decomposition set in, the chemical reaction proved too strong for even the stoutest cable and the circuit quietly expired.

Service was rendered by ACS to various polar expeditions, the most notable being that of the flight of the transpolar dirigible *Norge*, under command of Captain Roald Amundsen, from Spitzbergen to Teller, Alaska, in May 1926. That same year, a large volume of press messages also was transmitted for the Detroit Arctic Expedition, during its efforts to reach the Pole via Point Barrow.

On 16 August 1935, Sergeant Stanley R. Morgan (presently Major Morgan, commander of the ACS Nome station) while on duty at the lonely Point Barrow station, well within the Arctic Circle, found the bodies of Will Rogers and Wiley Post and flashed that sad news to the world. For two days, Sergeant Morgan wrote and transmitted articles, telling the story of the plane crash. With the aid of a crew of natives he steered a whaling boat through floating ice to recover the bodies.

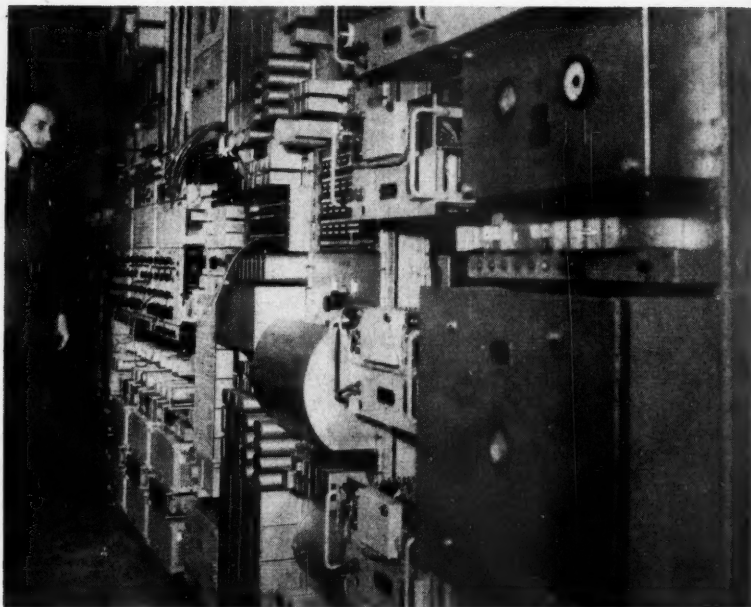
Through fires, floods, shipwrecks and epidemics, the ACS men have kept at their posts, flashing news of the events to the world and co-ordinating rescue and relief efforts. When in 1934 two-thirds of Nome's business district went up in flames and \$2,000,000 in property was destroyed by fire whipped by high winds, ACS Nome stayed on the air, co-ordinating relief and rescue work.

From a small, largely "commercial type" organization with fewer than 190 men, the System at the outbreak of World War II suddenly expanded into a major tactical communication service. It operated over an area about as great as any theater in the war, with vast distances between localities and installations, and uncertain and erratic means of transportation between these points. By 1944, ACS had two thousand officers and men assigned. Their job—to maintain reliable communications within the Territory and to the United States and its allies.

Facilitating the changeover to large-scale wartime operations, ACS already had accumulated an experience record of twenty years of intensive personnel training and forty years of supplying northern outposts. As far back as 1922, ACS had trained its own cable operators. In 1932, it launched its own radio mechanics school in Seattle. In 1936 and 1937, schools were conducted at Anchorage, Juneau and Seattle to train enlisted men in the operation, maintenance and repair of radio equipment and in administration and supply matters.

When war came, ACS expanded its schools to train hundreds of men in radio operation, maintenance of equipment, teletype operation and maintenance, censorship and signal intelligence. ACS was assigned supervision of the planning and operation of the Alaska Signal Depot consisting of two large warehouses at Fort Richardson, Alaska, and including machine and electrical shops. Meanwhile it operated its own supply depot in Seattle, with sub-depots at Anchorage, Fairbanks, Juneau and Adak.

Training and supply planning paid big dividends when ACS men landed at Amchitka, Adak, Shemya, Attu, Atka and Kiska. During the Aleutian campaign against the Japanese in 1943, Signal teams went ashore with combat troops and quickly established radio communications from those beachheads back to field headquarters. Meanwhile, its installation teams were building Army post telephone systems and improving long lines which linked central Alaskan military establishments.



A Signal Corps wire chief checks equipment in the Juneau frame room of Alaska Communication System.

U. S. Army Photograph

Other ACS teams installed facilities for the Army Airways Communication System and the Aircraft Warning Service.

Besides being charged with the engineering, construction, and operation of all fixed station communications equipment for the Northwest Service Command, ACS planned and supervised the telegraph and telephone communications for the construction and operation of the Alaska Highway. The difficulties encountered in this latter enterprise were reminiscent of those of the early construction period.

Driving trucks over half frozen rivers as the ice dipped and sagged; floundering through five-foot snow drifts; battling to put on crossarms and string wire by oil lamps, flashlights, and automobile headlights in temperatures thirty degrees below zero and colder—these conditions were commonplace as signal crews fought to complete the line on schedule.

The wires, strung on 72,000 poles, carried voice and teletype signals to augment the radio circuits. Upon completion of the line, a distance of 1922 miles between Fairbanks, Alaska, and Edmonton, Alberta, official calls were placed on 22 May

1943 from Whitehorse to Washington, D.C. On 13 October the first call was placed from Fairbanks to Seattle and another call plugged in from Seattle to Washington; the triangle totaled more than 8000 miles.

In June 1946 the military operation of the Alaska Highway Telephone System, as the line was named, was terminated and assumed in Canada by the Canadian Department of Transport. This agency established the Northwest Communication System (NCS) to operate the facilities between the Alaska-Yukon border and Edmonton. Both the Alaska Communication System and the Northwest Communication System have continued to maintain the ALCAN system.

Service to the Territory of Alaska did not end with the cessation of World War II; rather it meant an expansion and improvement of service. ACS has had to resort again to intensive training programs to produce the highly qualified specialists required. Outmoded and inadequate buildings and plant are being replaced, expanded or newly constructed as fast as time and budgetary allocations permit.

Including landline, submarine cable, high and low frequency radio and VHF and microwave radio, ACS facilities total approximately 35,300 circuit miles, 25,300 of which are provided by radio, 6800 by open wire lines and 3200 by submarine cables.

Today the System would hardly be recognized by the far-seeing Secretary Root and General Greely. In addition to its headquarters at Seattle, ACS has installations at 44 widely-separated points throughout the territory. Thirty-one of these installations are located at the larger population centers and provide telegraph service to governmental agencies and the general public. At all but four of the remote smaller points, namely Barrow, Bethel, Craig and Kotzebue, telegraph service is provided by teletypewriter. At 26 of its 31 public service stations in Alaska, ACS provides the public long distance telephone service.

Supplementing the ACS network are some 300 radiotelephone stations located throughout the remote and isolated regions of Alaska which provide the sole means of communication. Many of these stations are owned by individual miners, salmon cannerymen, trappers and settlers. Some 75 stations are operated by the Alaska Aeronautical and Communications Commission,

a Territorial supported agency created to provide essential communication in the remote communities and villages where from a half dozen to fifty or one hundred families may live. Another 75 stations, operated by the Alaska Native Service, are located in the remote Bering Sea and Arctic Ocean Areas and afford the only means of communication for the Eskimo villages there. These connecting line or "bush" stations, as they are more commonly called, communicate with the nearest ACS station by means of small radiotelephone sets of from 20 to 100 watts in power, handling both telegrams and telephone calls as the occasion demands.

In addition, the ACS maintains along the 23,000 miles of Alaska coastline, 18 coastal stations from Ketchikan to Barrow which serve coastal ship traffic. Transportation to many points in Alaska is possible only by means of small vessels plying the coast. Further, as fishing is a predominant means of livelihood, communities such as Cordova, Sitka, Petersburg and Ketchikan have great concentrations of fishing vessels. Some 1000 of these vessels are radio-equipped and rely upon the ACS to provide coastal station facilities for communication with their homes and businesses.

Approximately 60 percent of the ACS telegraph load is devoted to traffic originating from civil and commercial interests, with the rest equally divided between military sources and other Federal agencies. Since the initiation of long distance telephone service to Alaska, the use of this means of communication by Alaskans has increased to such extent that approximately 65 percent of the ACS cash revenue is derived from this source. Statistically 70 percent of this traffic load originates from civil and commercial sources; 17 percent from the military and 13 percent from the Federal agencies.

ACS facilities interconnect with the commercial telephone and telegraph companies at Seattle, Washington, to provide telephone and telegraph service between Alaska and all points throughout the world served by these companies.

Supplementing the above services, ACS also offers telegraphic money order transfer service, press service to newspapers and radio broadcast stations, long-lines facilities for radio broadcast networks and stations in the Territory, rural telephone subscriber service and lease of full period communication lines and equipment. Airline and steamship companies today

are relying to a great extent upon this leased service.

Due to the ever-increasing private business activity, population growth and military importance of Alaska, ACS must continually plan toward the improvement and expansion of its buildings and communications network. A recent major improvement was the placing in service of new toll buildings at Anchorage and Fairbanks which will enable operator toll dialing to be initiated between these two cities—the first such type service in Alaska. Expansion of the switchboard facilities at Juneau and Ketchikan during the current fiscal year is in keeping with their growing toll telephone needs.

ACS is presently engaged in a two-year program of constructing a 370-mile coaxial submarine cable to Southeastern Alaska between Ketchikan and Skagway which will link with other Alaskan points. When completed, it is expected that the new cable will be joined at Ketchikan with an 800-mile submarine cable being planned by the American Telephone and Telegraph Company. Upon completion in late 1956, these facilities will provide a capacity of 35 voice and 18 teletype circuits—sufficient to meet the foreseeable military and commercial mainland communications requirements for some time.

In keeping with the Signal Corps program of emphasizing unit traditions, the Quartermaster General has recently approved a distinctive ACS shoulder insignia, in recognition of the part which ACS has played in the development of the territory of Alaska and emblematic of the Signal Corps' determination to "Get the Message Through."

ACS insignia features the North Star. Signal Corps colors (orange and white) appear against blue back-



ground. The lightning represents the mission of communications with all parts of the world.

G-1 Cuts a Slice

Milton A. Schwartz

HOW MANY noncommissioned officers presently serving in Europe may be expected to reenlist? Just how many pupils in the Far East Command will enroll in Dependents Schools next semester? What amount should be budgeted for pay of Regular Army retired members during the next fiscal year? How many additional housing units will be needed to accommodate Army personnel and their families in Alaska? What criteria for promotion are most desirable?

Wherever plans and policies affecting the Army are formulated, questions such as these inevitably arise. For without a firm foundation of facts to support long-range programs, even the best considered plans may go awry, reducing elaborate estimates and forecasts to the stuff that dreams and wishful thinking are made of.

By using a scientifically balanced survey method based on a sampling of troops having a predetermined service number, the Army since 1943 has been able to answer with relative ease and accuracy the multitudinous queries posed by various staff sections, Congressional Committees and other Government agencies. Desired data are quickly assembled with a minimum disruption of normal activities. The Manpower Control Division in the Office of the Assistant Chief of Staff, G1, is the agency which directs the compilation of much of this factual data. Using scientific techniques, it slices the all-important cross section which forms the basis for many vital policy decisions.

The combination of policies for which the Office of the Assistant Chief of Staff, G1, is responsible may be likened to a complex and carefully planned mosaic, in which no two elements are the same size, form or have the same impact, yet all must

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fit together to produce a clear, understandable and well balanced picture. To operate effectively in such broad fields as classification, procurement, distribution and separation of personnel requires detailed knowledge of a wide variety of Army personnel characteristics, including such factors as age, length of service, military occupational specialty, educational level, reenlistment intentions, time in grade, state of residence, intelligence level and the like.

Prior to World War II when Army strength (including the Air Corps) was less than 200,000, it was a comparatively simple task to record and compile these vital statistics. Such data were usually extracted from the entire Status Card file maintained in The Adjutant General's Office, or, if sufficiently urgent and not readily available at Department of the Army level, from records kept in the field. However, by 1943 Army strength was approaching 7,000,000. With the acute shortage of manpower and equipment in World War II, the Status Card file had to be discontinued, for in reality it duplicated information available in the field. At the same time, field units could not assume the added task of submitting regular reports on personnel characteristics of all members Army-wide. As a result, the Personnel Survey was introduced—a scientific sampling technique to procure information accurately, quickly and regularly.

When originally initiated on the last day of 1943, the Personnel Survey consisted of a quarterly 2 percent representative sample based on completed questionnaires. With the reduction in the size of the Army after World War II, coverage was increased to 5 percent in order to insure validity and reliability.

The sampling technique follows a definite pattern. Individuals included in a survey are selected on the basis of the last two digits in their service number. Since there are, in all, one hundred possible combinations of two digits each, ranging from 00 to 99, each set of two digits will cover approximately one percent of the Army. Five sets of two digits chosen at random are used to provide the approximate five percent coverage on which current surveys are based.

Because of the difficulties encountered in obtaining the desired information in all cases, certain categories of personnel are specifically excluded—those being processed for separation, those assigned in medical holding detachments, personnel centers, or oversea replacement depots, and those en route to and

from oversea commands. As a consequence the survey coverage in actuality is more nearly four to four and a half percent of the Army strength.

Operation of the survey affects virtually every echelon of command. The Office of the Assistant Chief of Staff, G-1 determines the questions to be included in the survey. The Adjutant General's Office prepares the questionnaire and detailed instructions, which are then sent to headquarters of the major commands for distribution to all personnel units within the command. In the personnel sections the questionnaires are filled out from available records. Certain "interview type" questions are answered by the individuals concerned when they are called in to verify the information recorded on the questionnaires.

Completed forms are sent to the Machine Records Unit of the headquarters of the major command, where appropriate punch cards are prepared. These cards are then forwarded to the Adjutant General's Office in Washington where information from all major commands is consolidated in summary form and machine record tabulations and summaries are prepared. The resulting summaries reflect the expansion of the results of the survey to the total Army strength.

Utilization of information obtained from the Personnel Survey is not limited to the Department of the Army level. Data which pertain to a specific command are frequently helpful in determining local policies and programs affecting housing, schooling and recreational activities of military personnel and their dependents. The findings may be used to advantage in establishing local promotion criteria or to assure more effective assignment of personnel. Personnel requisitions can be based on a detailed knowledge of dates of impending separations and intentions to remain on active duty beyond those dates. Recruiting plans, budget estimates and character guidance programs—all benefit from the Army's Personnel Survey.

Detailed personnel characteristics of the Army world-wide are published quarterly in the Army Progress Report, Section 3A, Military Personnel. In addition to serving the needs of the many offices at the Department of the Army level, it provides an excellent opportunity for comparison of personnel characteristics within a major command with those of the Army as a whole, thereby indicating areas of potential improvement.

The Survey itself is constantly studied and evaluated for

validity and reliability by the application of approved statistical techniques and by checking against information based on audited figures, inventories or other verifiable facts. The audited Army strength by major commands and officer qualification records maintained in the Career Management Division of The Adjutant General's Office are two sources of data which provide bases for statistical checks. In addition, a follow-up spot check has been instituted to determine the correlation between indicated plans to remain on active duty beyond the completion of a term of service (as revealed by the Survey) and the action actually taken when a term of service expires. Virtually all tests, checks and comparisons reveal that Personnel Survey data are extremely valid and highly reliable.

How the Army Personnel Survey Checks Out

<i>Military Occupational Specialty</i>	<i>Actual Number In Inventory</i>	<i>Estimated Number From Survey</i>
A	1,111	1,200
B	4,913	4,500
C	20,420	20,900
D	42,687	42,100
E	21,565	22,600
F	17,790	18,600
G	59,952	59,400
H	23,928	26,900

The above table shows how the Personnel Survey method checks out in a comparison with statistically verifiable facts. The actual number of enlisted men in a particular Military Occupational Specialty (as determined by inventory) compares closely with the figures obtained by the five percent sampling method.

The necessity of obtaining useful, accurate and timely information and making increased use of the sampling technique is a paramount consideration in Army planning. During the past two years, the scope of the Survey has been broadened considerably—particularly in the area of estimating strengths, attrition rates, and determining the effects as well as cost estimates of proposed personnel changes. Only recently the sampling technique was employed to obtain information concerning members of the Army Reserve and National Guard who are not on active duty. In this manner, information about personnel in the reserve components, heretofore obtained at great cost in time and money, will now be readily available along with data on the Active Army—thus providing still another means of determining the Army's potential should an emergency arise.



Litter evacuation is practiced by members of the Army Mountain Training School at Camp Weir, Japan. Below, a three rope bridge is a wobbly but easy method of crossing ravines and rivers. Such techniques paid off at Agrihan.

U. S. Army Photographs



A Terse Radio Message Spelled Out

Peril At Agrihan

Sergeant Jerry Adler

SOMETIMES many months or even years may elapse before the training received at Army schools is put to actual test. But for ten members of the Army Mountain Training School at Camp Weir, Japan, the challenge came tersely in the form of a radio message from the United States Navy. It called for a perilous rescue mission on the volcanic island of Agrihan in the Marianas—a test which demanded all of the mountain climbing skills taught at the school, and a liberal supply of undiluted courage besides.

In December 1953 Guam experienced two closely related pre-Christmas air tragedies. One of these involved a Privateer of the Navy's VW-3 weather squadron, which disappeared in the vicinity of Agrihan Island on a routine check of Typhoon Doris. The second mishap occurred on 20 December when a C-47 searching for the missing Privateer crashed within the crater of a 2000-foot dormant volcano on

Agrihan Island, some 320 miles north of Guam. Ten crew members had manned the ill-fated craft.

Two days later the wreckage was sighted by a Navy Privateer. A rescue party consisting of Navy doctors, a Marine land rescue team, and two Agrihan guides was rushed to the scene. They discovered that the plane had crashed into the 1500 foot-high southwest side of the volcano's crater wall, approximately 800 feet from the crater floor. A portion of the plane had fallen 400 feet from the point of impact and was resting on a ledge.

The search party had reached the lower wreckage and identified but could not remove four bodies. They then attempted to reach the other part of the wreck but found it impossible even with the assistance of the two native guides.

The Army Mountain Training School at Camp Weir, Japan, was then alerted to prepare for a special recovery mission. Orders to the School Commandant read, "You will take the action to place one officer and nine en-

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listed men on 30 days temporary duty with the U. S. Navy. These personnel will be used in connection with recovery operations of a plane crash 320 miles north of Guam. Personnel should realize area consists of steep volcanic terrain with heavy undergrowth and deep canyons."

A mission of this kind was not new to the School Commandant, Lieutenant Colonel H. E. Link. An accomplished alpinist himself, and formerly a member of the Mountain and Cold Weather Training Command, Camp Carson, Colorado, he had undertaken numerous special assignments. Members of his staff had previously assisted the 1st Cavalry Division in their 1953-54 winter training program. A two-week survival course for Air Force flight nurses and flight technicians and a course in summer mountain techniques for the Japan National Safety Force had been instituted under his direction. The Agrihan salvage mission, however, was the greatest challenge to be faced since the School was established in June 1953.

The ten men chosen had been thoroughly primed in winter mountain climbing techniques. Their training at the School included rappelling—descending a mountain with a rope doubled around a tree, projecting rocks, or several pitons (iron pegs) tied

together—use of the three-rope bridge to cross ravines, gulches or streams, and rope-throwing to cross crevasses. Rock climbing, chimney climbing, and use of the litter for evacuation of wounded in mountainous terrain were among the skills acquired.

Early in March 1954 the team, headed by Lieutenant Paul A. Anderson, reported to Yokosuka Naval Base near Yokohama. During a stopover at Guam, they were briefed on conditions surrounding the rescue mission. There, too, they were joined by Ernest K. Fields, Hawaii National Park forester familiar with mountain climbing and volcanic terrain, a Marine lieutenant, a Navy physician and two native guides.

On 9 March the rescue party landed at Agrihan, and set up camp on the beach. The long and hazardous climb to the rim of the volcano was begun by the tri-service team the next morning.

The rim was gained shortly after noon. Descent to the crater floor was accomplished and camp was set up near a waterfall.

A scheduled air drop the following morning, 11 March, was rendered impossible by the heavy overcast. It was decided nevertheless to recover the bodies using the limited materials available.

The group was split up. Marine Lieutenant Schmidt, six en-

listed specialists from the School and the two native guides were to climb to the 400-foot-high ledge where part of the wreckage containing the four dead was precariously perched.

Mr. Fields, Lieutenant Anderson, and the remaining members of the rescue team would attempt to reach the point of impact, 800 feet up the sheer northwest side of the crater, to recover the remains of the six other crew members.

Lieutenant Schmidt's group encountered heavy overcast, rain, and high turbulent winds during the almost vertical climb. Thick moss and little shrubbery afforded few hand-holds. All known skills of mountain climbing were brought into play.

The ledge was finally reached, and the remains were packed into ponchos and a rubber life raft found at the wreckage. Notwithstanding all the forces of nature opposing them, the group carried the dead to the top of the northwest rim. The operation took less than five hours.

The second group, attempting to reach the point of impact, also faced frustrating problems — wind and rain, insecure foot and hand-holds, and approximately 700 feet of near-vertical rock covered with moss and muddy earth. Approaching the point of impact from above was out of the question. A left-hand route

to the wreckage was therefore attempted. After four hours of grueling ascent, and with success almost in sight, the group was forced to turn back after encountering a vertical wall covered with nothing but moss.

The men returned to camp. Late that afternoon another air



A suspension traverse is used to cross ravines or to descend steep inclines.

U. S. Army Photograph

drop of rations and supplies was attempted. Violent winds prevented the pilot from hitting the crater by parachute but finally an 80-pound can of rations was free dropped.

On the morning of 12 March it was decided to abandon the attempt to reach the upper wreckage. The group broke camp and proceeded to the northwest rim where the four recovered bodies were wrapped in plastic sheets and lashed to packboards.

Both the climb out of the crater and the descent were extremely hazardous because of 35- to 85-degree slopes and the added weight of the remains and rescue gear. After arriving at beachside, the group was picked up and transported to Guam aboard the *USS Edmonds*.

Proceeding via air to Tokyo and truck to Camp Weir, the rescue team members of the Mountain Training School returned to

their home base. A perilous mission had been carried out.

The Mountain Training School was one year old on 1 June but already, numerous letters of commendation testify to its achievements. Among them is the following message from the Commander, U. S. Pacific Fleet:

"The Commander, Naval Forces, Marianas, wishes to express his appreciation to you for your outstanding performance of duty in connection with the Agrihan Island recovery operation. During the period 8 to 13 March 1954, your unflagging co-operation and gallant acceptance of the hardships and the physical dangers involved are an inspiration to all. Well done."

Potential Life Savers

Conversion of salt water into fresh for troops at island and desert bases will be accomplished more rapidly and economically as a result of investigations recently completed by the Engineer Research and Development Laboratories, Fort Belvoir, Virginia. Using a newly perfected thermocompression method, steam from boiling sea water is compressed and recycled to maintain the boiling action. As the latent heat is transferred to salt water, the steam condenses to form pure salt-free distillate. But scale deposited by the brine has, in the past, doubled the cost of distillation. Under the new process, frequent descaling with citric

acid will permit indefinite maintenance of fresh water supply by field units.

The Army Chemical Corps has for some time been developing a protective face mask for the civilian population which would afford adequate protection in case of chemical, bacteriological or radiological attack. The mask would be easy to use and yet cost little to produce.

The Corps has been authorized by the Department of Defense to procure 8000 of these now perfected civilian masks for the Federal Civil Defense Administration.

That Others May Live

Lieutenant R. W. Bomberger, Jr.

ABOUT A YEAR AGO a convicted automobile thief serving a term in a Federal penitentiary died of complications following a case of yellow jaundice. From all outward appearances his death seemed without significance. But actually this young convict, like many others, was voluntarily assisting the Army and medical science in the study of yellow jaundice. The disease, technically known as hepatitis, is one of prime military importance. Though rarely fatal, it has for years attacked soldiers by the thousands and has defied the best efforts of medical researchers seeking its cause and cure. Yet on his own volition the prisoner intentionally contracted the disease by inoculation. He was well on his way toward recovery when unexpected complications took his life.

While his was an exceptional and unfortunate case, the young man's death serves to point up the increasingly prominent role that human volunteers have played in rendering valuable assistance to medical science.

After laboratory experimentation has advanced to its final point and testing on animals has been completed, the medical researcher is confronted with the next logical question—how will the resultant product react on human beings? Here the answer depends on the dedicated courage of volunteers. Some are students in research projects at universities. Others are the doctors and laboratory scientists themselves. Early in Army medical research, soldiers volunteered; during World War II many conscientious objectors offered themselves as subjects in medical experiments; and so did prisoners in penal institutions. The contributions of many of these groups continue even today.

During the decade that prisoner volunteers have been utilized in medical research, only three have died out of several thou-

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sand who have staked their lives in at least ten Federal and state penitentiaries. Volunteers do not have their prison terms reduced, nor are they given any preferential consideration other than a small monetary allowance for their service. Generally, they continue on in their prison routines unless hospitalization becomes advisable. Always they remain under careful supervision of medical officers.

To date, the Army Medical Service has been responsible for most of the research in which human volunteers are utilized. Some of this work has been carried on by Army medical officers, but most of it has been done for the Army under contract by the National Institutes of Health and by prominent medical research specialists from American universities under sponsorship of the Armed Forces Epidemiological Board and the National Research Council. Prisoners are used with the co-operation and assistance of the Bureau of Prisons, Department of Justice, and prison officials of several State governments.

The idea of using human beings as research subjects in medicine is not new. During World War II fanatical Nazi physicians used unwilling concentration camp inmates and prisoners of war as subjects for medical research, often perpetrating ghastly atrocities on the enslaved unfortunates.

Such has never been the case with the program born in the United States during the early part of World War II. A strict code of regulations was put into effect. Under its provisions the use of prisoners of war was declared illegal, and no one has ever been subjected to any phase of medical research against his will. The sole inducement is the man's personal desire to assist his country's defense effort and his fellow man in the only way possible for him under the circumstances.

Volunteers are carefully screened. All are between the ages of twenty-one and thirty-five with a history of excellent health. Each is given a thorough physical examination and, during the entire course of a research project, is under the careful supervision of a medical officer. Since the program's inception, civil prisoners have never been exposed unnecessarily. Projects are closely co-ordinated to avoid duplicate experimentation.

Among the achievements already recorded, volunteers were used to test the possibilities of antimalarial drugs which today are being used to fend off and cure malaria among United States troops overseas. Still others enabled scientists to gather elusive

data on serum and infectious hepatitis. And closely allied to hepatitis, they have also helped advance research in possible methods of sterilizing blood, blood plasma and other blood derivatives. Some have aided medical investigators seeking data on the common cold and influenza. At present many of these volunteers are working with Army medical officers testing the possible toxic effect of tick and mite repellents on humans.

Volunteers contributed significantly to the Army's long struggle against the ravages of malaria—a disease transmitted by the mosquito and characterized by recurring chills and fever, which formerly struck down thousands of American soldiers in almost every war or campaign. Though seldom fatal, the disease rendered its victims unfit for duty for long periods of time.

During World War II when American troops were fighting in the malaria-ridden jungles of the South Pacific, the disease was a serious threat to the success of military operations. At one time about thirty thousand troops, the equivalent of two combat divisions, were unfit for duty because of the disease.

Quinine then was one of the few drugs known to act as a suppressant, but the main source of this drug was cut off when Japanese hordes swarmed over the islands of the Pacific. In its place American doctors were obliged to administer daily doses of atabrine which often produced nausea, cramps, diarrhea and yellowing of the skin. A substitute had to be found.

About that time, doctors had developed the now famous sulfa drugs and it was thought that these might have some effect as antimalarials. Extensive tests were conducted, using chickens as hosts for the disease. The sulfa drugs indeed had an effect upon malaria in fowl. But how would they react on human beings and how could they be tested?

Research specialists wrestled with the problem and reached a difficult decision. At two mental hospitals in the United States they tested the sulfa drugs on mental patients suffering from neurosyphilis who previously had been purposely infected with malaria as a prescribed treatment for their condition. It was learned through these tests that the sulfa drugs did not affect malaria in human beings as was hoped.

World War II closed with victory in combat against the enemy, but the battle against malaria continued. Research was stepped up and as a result a new suppressant, chloroquine, was made available for field use when the Korean conflict began.

But the medical researchers also were looking for a *cure*. Primaquine, a new drug compound developed after World War II, was found to be capable of killing malaria parasites in laboratory animals. But would it do so in humans and would it have any toxic effects? Tests on human beings could provide the answers. Volunteers were selected and tests were run. The results were gratifying. With the outbreak of the Korean fighting, all American troops in the combat zone were administered weekly doses of chloroquine to ward off any symptoms of malaria. On the homeward voyage they were given primaquine once a day for fourteen days. To date, few if any returned American troops have come down with malaria. Credit for this achievement belongs not only to the medical researchers who compounded the drugs but also to the prisoner volunteers who first tested them.

Testing of the antimalarial compounds was conducted by University of Chicago scientists at the Illinois State Penitentiary under an Army Medical Service contract, with Army medical officers on hand to supervise the care of the prisoners. Tests also were carried out at the Federal Penitentiary in Atlanta.

Studies of yellow jaundice (hepatitis) and related research in possible methods of sterilizing human blood and blood plasma, also depended heavily on human volunteers. This disease, which has in the past reached epidemic proportions in the American Army, is discernible in two forms known as infectious and serum hepatitis. The main differences between the two are the periods of incubation and the means of transmission. Infectious hepatitis is thought to be transmitted orally while serum hepatitis is thought to be transmitted by transfusion of infected blood or blood plasma.

Unlike most other types of disease, hepatitis cannot be propagated in a laboratory animal, tissue culture or an embryonated egg. Indeed, no satisfactory tests have been developed which can determine whether a person is carrying the virus in his blood. Thus the only method of obtaining direct information is by the use of human volunteers.

During the fall and winter of 1943-44, when incidence rates for infectious hepatitis increased among American troops in North Africa, the Preventive Medicine Division, Office of the Surgeon General, began investigations to determine how the disease spread and how it might be prevented. The need for

human volunteers to aid such studies was clearly indicated.

Prison officials in several states were approached by the Army and approved the project on a volunteer basis. After thorough physical, laboratory and x-ray examinations, thirty-one volunteers at the State Prison of Southern Michigan were chosen. These men were fed or inoculated with infected material from Army hepatitis patients in Italy and then were carefully watched by doctors for several months. At the first sign of infection, the men were hospitalized and placed on special diets. As a result of these tests, physicians were able to determine more closely the incubation period of the disease. Comparable tests were conducted at the New Jersey State Prison and several other penitentiaries.

Research in hepatitis using prisoner volunteers was continued after World War II. The Army (later Armed Forces) Epidemiological Board sponsored the projects in conjunction with the United States Public Health Service and National Institutes of Health in co-operation with the Bureau of Prisons, Department of Justice. In this series of tests more than one thousand volunteers at three Federal penitentiaries—Lewisburg, Pennsylvania; McNeil Island, Washington; and Ashland, Kentucky—were utilized.

Volunteers were carefully screened to exclude those whose health might be jeopardized and to insure that all subjects met normal criteria. The subject's past medical history was reviewed; he was given a complete physical examination; and a number of liver function tests were performed.

After being inoculated with the virus, the volunteers were examined weekly. Whenever symptoms appeared, the subjects were hospitalized and liver tests were performed routinely twice a week or more. Patients were placed on a special diet, with food intake carefully weighed to insure a uniform level of consumption. Cases of all degrees of severity occurred. The more serious ones were the subject of consultation with nationally known authorities on liver diseases. Patients were not discharged from hospitals until full normalcy had returned. Even so, despite the controls and rigid supervision maintained, three fatalities occurred.

Thus far the studies have led to the accumulation of previously unknown information or have, on occasion, confirmed unsubstantiated factual data concerning hepatitis. Without this

knowledge, medical researchers could never hope to discover the cause, cure and means of preventing the disease. Much work remains to be done, however.

Also with the co-operation of volunteers, medical research specialists have been testing influenza vaccines. The objective—to determine how much vaccine can be administered to derive the maximum benefit for the greatest length of time. Several hundred prisoner volunteers participated in these tests.

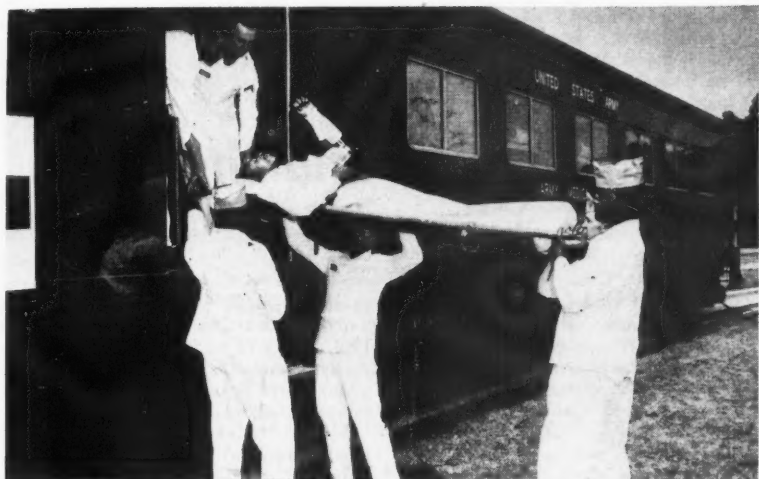
Only recently, Major General George E. Armstrong, The Surgeon General of the Army, announced that prisoner volunteers at the Illinois State Penitentiary were engaged in tests to determine the possible toxic effect of several tick and mite repellents on humans. The purpose of these tests was to determine the maximum strength of repellents that the human body could withstand without untoward effects. The Department of Agriculture Laboratory at Orlando, Florida, working under a contract from the Department of the Army, already had proved the effectiveness of these repellents against a variety of disease-bearing insects.

During the four-month test period, volunteers wore clothing impregnated with the repellents in varying degrees of strength while they carried out their normal prison duties. An Army medical officer and several enlisted technicians were constantly on hand to watch for any signs of skin rash or irritation. At no time were the prisoners exposed to insect bites.

These latest tests are being sponsored by the Research and Development Division, Office of The Surgeon General, in conjunction with the University of Chicago, and are being conducted by personnel of the Army Environmental Health Laboratory, Army Chemical Center, Edgewood, Maryland.

From the advances already made in malaria and hepatitis control, men and women of the Armed Forces as well as the entire civilian population of the United States stand to benefit. Much of this progress—and other conquests yet to come—will be due to the work of nameless volunteers in Army research.

New-Type Hospital Train



The Army has accepted delivery of three new types of self-sustaining hospital cars for overseas service. Built to operate on any broad gauge railroad throughout the world, the new cars were jointly designed by the Army Medical Service, the Transportation Corps Research and Development Command, and by ACF Industries, Inc. Each is equipped with a special axle and wheel seat which can be adjusted for operation on 56½- to 66-inch gauge railroad tracks. With specially designed equipment, the cars are

adaptable to world-wide use.

The new equipment, presently undergoing service testing at Fort Eustis, Virginia, represents the basic types of cars to be used in hospital trains of the future: a personnel car for the medical staff, an ambulance car capable of providing for 30 patients, and a kitchen-dining-storage car with capacity for feeding 150 persons. All cars are self-sustaining with light, water, forced ventilation and heat. The ambulance car in addition is air-conditioned.



PARAGRAPHS

from

The Pentagon and the Field

Army troops throughout the world will be immunized against influenza prior to 15 November, before the onset of the usual winter respiratory diseases. Troops entering the Army after 15 November will be given the vaccine as soon as possible after induction. The new immunization policy has been agreed upon by the Surgeons General of the Army, Navy and Air Force. Last year, only Army troops in oversea commands were given vaccine for influenza.



During fiscal year 1955, the Joint Welfare Board, Departments of the Army and the Air Force, plans to make available for the welfare and recreation of Army military personnel within the continental United States, an average of about \$2.25 per man per month. The planned dividend is an increase over last year's average of about \$1.75 per man per month.



The 83d Congress authorized approximately 12,000 family housing units for the Army, Navy, and Air Force to cost \$175,000,000. An appropriation of \$75,000,000 was also passed, to build the first phase of the program. The Army has been allocated \$26,250,000 of the \$75,000,000 total. Among the first projects will be an 800-family housing unit costing \$10,000,000, at Fort Lewis, Washington.



Designations of approximately 500 reserve component units of battalion and smaller size now on active Federal service will be returned to appro-

priate United States Army Reserve and National Guard control by March 1955, and will be replaced by Regular Army designations. Concurrently, personnel and equipment will be transferred to the new units.

Since Reservists and National Guardsmen who entered on active duty with reserve component units during the Korean emergency already have been separated (except for those who volunteered for continued active duty), the changes in unit designation will not involve any movement of personnel.



The Finance Center, Retired Pay Division is now paying 100 annuitants under the provisions of the Uniformed Services Contingency Option Act of 1953. This law permits retired persons to elect to receive a reduced amount of pay in order to provide an annuity, upon death, to their dependents.



National Guard antiaircraft artillery units are urgently seeking men with previous civilian or military experience in radar, electronics or fire control, as well as men without prior experience to bring to full authorized strength the non-divisional National Guard AAA battalions assigned to the vital "on site" program for defense against enemy aerial attack.

Age limits have been liberalized. National Guard AA units are accepting original enlistments of non-veterans aged 17 through 44 (instead of 17 through 34 for other units) and re-enlisting qualified veterans

with previous military service up to age 55. Each over-age enlistee and re-enlistee will remain with his unit throughout the period of his National Guard service. In event of emergency, National Guardsmen would be ordered into active military service with their units.



Development of a universal cake mix which will make available a greater variety for soldiers in the field has been announced by the Quartermaster Food and Container Institute for the Armed Forces. Four separately packaged flavors—orange, spice, lemon and devil's food—will be packed with the cake mix which is stable enough to withstand prolonged storage under the most adverse conditions.



A series of short postgraduate courses for medical officers is being conducted by the Army Medical Service, designed to keep medical officers in outlying installations abreast of recent medical advances. These are being offered both to active and inactive duty medical officers.

New type chevrons for enlisted Specialists will make their appearance Army-wide on 1 March 1955 when the new program for separation of Noncommissioned Officers and Specialists is scheduled to go into effect. (See "Leaders and Specialists for Enlisted Grades," August 1954 DIGEST.)

Legislative Review

NEW ASSISTANT SECRETARIES. Public Law 562—83d Congress provides for two additional Assistant Secretaries of the Army, Navy, and Air Force, respectively. (See page 18.)

ROTC COVERAGE. Public Law 638—83d Congress extends coverage of the Servicemen's Indemnity Act to members of the Reserve Officers' Training Corps when ordered to active training duty for periods in excess of fourteen days.

ERRONEOUS PAYMENTS. Public Law 497—83d Congress covers repayment "as the result of any erroneous payment" to a member of the Armed Forces or reserve component or an employee of the United States. The Act provides that "...the amount of the indebtedness may be collected in monthly installments, or at officially established regular pay period intervals, by deduction in reasonable amounts from the current pay account . . ."

BURIAL EXPENSES. Public Law 495—83d Congress provides for payment of expenses incidental to burial, or for reimbursement within limits to an individual who may have incurred such expenses for active members of the uniformed services.

PROPERTY AND FISCAL OFFICERS. Public Law 477—83d Congress, amends section 67 of the National Defense Act as amended to provide for an active-duty status for National Guard and Air National Guard officers designated or detailed as United States property and fiscal officers.

JAG PROMOTION LIST. Public Law 614—83d Congress authorizes integration of the Judge Advocate's promotion list with that of the Army to restore lost seniority and grade.

PRISONER OF WAR BENEFITS. Public Law 615—83d Congress extends certain civilian-internee and prisoner-of-war benefits under the War Claims Act of 1948, as amended, to civilian internees and American prisoners of war captured and held during the hostilities in Korea.

EXEMPTION OF RETIRED PAY. Public Law 301—83d Congress exempts certain commissioned officers retired for disabilities caused by instrumentalities of war from the limitation prescribed by law with respect to the combined rate of retired pay and of compensation as civilian employees of the Government which retired officers may receive.

Official Notes

ARMY STAFF MEETINGS. Department of the Army Memo 1-10-1 announces that Army Staff meetings will be held weekly or as otherwise directed in the Office of the Deputy Chief of Staff for Operations and Administration. These Staff meetings will replace the General Council which is now abolished.

FOOTWEAR REISSUE PROHIBITED. Department of Army Circular 97 points out that reissue of leather footwear to other than the original wearer is not authorized. This prohibition applies to all leather footwear not normally worn with felt insoles.

EXCHANGE OFFICERS. Department of the Army Circular 93 announces the transfer of assignment, training, and career management functions for Army officers in the Army and Air Force Exchange System from The Adjutant General to The Quartermaster General. Officers of all branches who are now serving as Army Exchange Officers (MOS 4210) are being encouraged to submit requests for transfer to the Quartermaster Corps under provisions of AR 605-145. Officers who have previously served as Army Exchange Officers, may also apply for transfer through channels to The Adjutant General.

CIVIL SCHOOLING. Department of the Army Circular 99 directs attention to the civilian schooling program for regular Army officers of the combat arms established under the provisions of SR 350-230-52. A shortage of available and qualified applicants for graduate schooling exists in the following fields: Automotive Engineering, Comptrollership, Electronics, Nuclear Physics, Guided Missiles and Meteorology (Artillery officers only). Selection of officers to commence training during June and September 1955 will be made on or about 1 January 1955. Qualified interested officers who have completed their branch Advanced Course will be encouraged to submit applications.

CASUALTY REPORTING. AR 600-400 states the basic policies for reporting casualties and nonbattle losses and for notifying the emergency addressee and other authorized persons.

ARMY ATTACHE VACANCIES. Department of the Army Circular 96 lists pending vacancies in the Army Attache System. Officers on active duty in the grade of captain and above may apply in accordance with SR 600-147-1.

ACADEMIC REPORTS. As stated in SR 605-85-10, a new Academic Report (DA Form 1059) has been devised to record the academic proficiency of officers attending service or civilian schools. Reports portraying the aptitudes, capabilities, accomplishments, and academic progress of the individual will be submitted on all officers attending courses of instruction or training covering a period of 60 calendar days or more at a service school or a civilian educational, medical, or industrial institution, including medical or industrial fellowships, internships and residencies.

PASSPORTS AND VISAS. AR 600-290 prescribes the procedure for obtaining passports and visas required for official and leave travel to foreign countries.

MORNING REPORT. SR 335-50-1 contains instructions governing the preparation, submission and disposition of the Morning Report (DA Form 1).

WEB EQUIPMENT. Department of the Army Circular 103 states in part that further attempts by field personnel to redye or recolor web equipment will be discontinued.

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(For explanation of abbreviations used see SR 320-50-1.)



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